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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,239	02/10/2006	Dieter Hermeling	29827/41758	6113
4743 7590 08/07/2008 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER PEPTONE, MICHAEL F	
			ART UNIT	PAPER NUMBER
			1796	
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			08/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,239

Applicant(s)

HERMELING ET AL.

Examiner

MICHAEL PEPITONE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 9-11 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9-11 and 14-19 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date ____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 7 is objected to because of the following informalities: the typo "as least" should be "at least". Appropriate correction is required.

Claim Rejections - 35 USC § 102

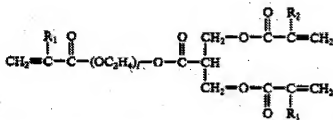
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi *et al.* (US 4,065,598).

Regarding claim 1: Takahashi *et al.* teaches:



(wherein R₁ and R₂ may be the same or different, standing for H or CH₃, 0 ≤ m ≤ 1, 1 = 5 - 300)

(3:45-63).

Claim Rejections - 35 USC § 103

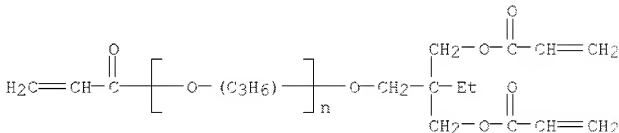
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama *et al.* (JP 62007711).

Regarding claims 1-3: Sugiyama *et al.* teaches a composition comprising:



(via STN; RN 123268-41-7).

Sugiyama *et al.* does not teach a value of n . However, a *prima facie* case of obviousness may be made when chemical compounds have very close structural similarities and similar

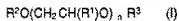
utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979) [See MPEP 2144.09].

Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH₂- groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977) [See MPEP 2144.09].

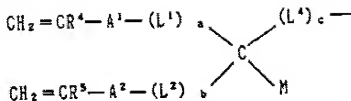
Claims 1-4, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe *et al.* (EP 0490368).

Regarding claims 1-3: Abe *et al.* teaches a composition comprising:

1) at least one monomer represented by the following general formula (I):



wherein R¹ represents a hydrogen atom or a methyl group; R² and R³ may be the same or different and each represents a functional group selected from the group consisting of those represented by the following general formula (II):



wherein, M represents a hydrogen atom, a monovalent functional group or a group: $\text{CH}_2 = \text{CR}^6 - \text{A}^3 - (\text{L}^3) \text{---} \text{d}$; R^4 , R^5 and R^6 may be the same or different and each represents a hydrogen atom or a methyl group; A^1 , A^2 and A^3 may be the same or different and each represents $-\text{CO}-\text{O}-$, $-\text{CO}-\text{NH}-$ or a substituted or unsubstituted phenylene group; L^1 , L^2 , L^3 and L^4 may be the same or different and each represents a bivalent connecting group; a, b, c and d may be the same or different and each represents 0 or 1 and n is an integer of not less than 1;

(pg. 2, ln. 57-pg. 3, ln. 21).

Abe *et al.* does not teach a specific value of n when R^2 and R^3 are different. However, a prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979) [See MPEP 2144.09].

Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by $-\text{CH}_2-$ groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977) [See MPEP 2144.09].

Regarding claim 4 and 10-11: Abe *et al.* teaches a glycerol moiety (pg. 5, ln. 25-35).

Claims 1-4, 6-7, 9-11, and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatsuda *et al.* (US 2002/0061978) in view of Abe *et al.* (EP 0490368).

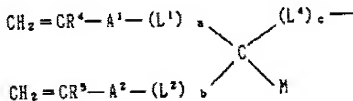
Regarding claims 1-4, 6-7, 9-11, and 14-19: Hatsuda *et al.* teaches a water absorbent resin {which forms a hydrogel} (§ 49-50) comprising internal crosslinking agents based on (meth)acrylic esters of polyhydric alcohols (glycerol tri(meth)acrylate, ethoxylated trimethylolpropane tri(meth)acrylate, etc.) (§ 53-55) [instant claim 6, 14-16]; prepared by an aqueous polymerization of hydrophilic monomers, internal crosslinking agent, and free radical initiators [instant claim 7] (§ 51, 57-62); for use in diapers [instant claims 9, 17-19].

Hatsuda *et al.* does not teach a swellable hydrogel comprising the structure of instant claim 1 as an internal crosslinker. However, Abe *et al.* teaches a composition comprising:

1) at least one monomer represented by the following general formula (I):



wherein R¹ represents a hydrogen atom or a methyl group; R² and R³ may be the same or different and each represents a functional group selected from the group consisting of those represented by the following general formula (II):



wherein, M represents a hydrogen atom, a monovalent functional group or a group: $\text{CH}_2 = \text{CR}^6 - \text{A}^3$, $(\text{L}^1)_n$; R^1 , R^2 and R^6 may be the same or different and each represents a hydrogen atom or a methyl group; A^1 , A^2 and A^3 may be the same or different and each represents $-\text{CO}-\text{O}-$, $-\text{CO}-\text{NH}-$ or a substituted or unsubstituted phenylene group; L^1 , L^2 , L^3 and L^4 may be the same or different and each represents a bivalent connecting group; a, b, c and d may be the same or different and each represents 0 or 1 and n is an integer of not less than 1;

[instant claims 1-3] (pg. 2, ln. 57-pg. 3, ln. 21); and the general formula contains a glycerol

moiety [instant claims 4, 10-11] (pg. 5, ln. 25-35). Hatsuda *et al.* and Abe *et al.* are analogous art because they are concerned with a similar technical difficulty, namely the preparation of crosslinked polymers comprising (meth)acrylic esters of polyhydric alcohols. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined general formula 1 as an internal crosslinking agent, as taught by Abe *et al.* in the invention of Hatsuda *et al.*, and would have been motivated to do so since Abe *et al.* suggests that such (meth)acrylic esters of polyhydric alcohols {general formula 1} are capable of reacting with (meth)acrylates and alkali metal salts thereof (pg. 6, ln. 25-31), and is an equivalent alternative means of providing crosslinked polymers comprising (meth)acrylic esters of polyhydric alcohols.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. See attached form PTO-892.

Response to Arguments

Applicant's arguments with respect to claims 1-7 and 9-19 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PEPITONE whose telephone number is (571)270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo, Ph.D./
Supervisory Patent Examiner, Art Unit 1796
1-Aug-08

MFP
28-July-08